

**IN THE DRAWINGS:**

Fig. 4 has been revised to show that "WHICH S?" relates to --WHICH INPUT SIGNAL?-- for consistency with the specification.

## **REMARKS**

In accordance with the foregoing, claims 1-16 are pending and under consideration.

### **Prior Art Rejections**

Claims 1 and 6-16 are rejected under 35 USC § 103(a) as being obvious over U.S. Patent No. 5,119,816 to Gevins in view of Arroyo et al., "A Modular Real-Time Brain Wave Detection System" (April 1982). Claims 2 and 3 are rejected as being obvious over Gevins in view of Arroyo et al. and further in view of Peng et al., "Generalization and Comparison of Alopex Learning Algorithm and Random Optimization Method of Neural Networks" (May 1998). Claims 4 and 5 are rejected under 35 USC § 103(a) as being obvious over Gevins and Arroyo et al. in view of Deco et al., "Information Transmission and Temporal Code in Central Spiking Neurons" (1997).

In response to the previous Office Action, Applicants argued that Gevins does not relate to training a neural network. On page 15 of the Office Action, the Examiner cites column 4, lines 7-9 of Gevins. This excerpt simply indicates that a neural network or other mathematical computer pattern classifier may be used to classify the shape of a patient's head. This excerpt establishes that neural networks exist. However, this excerpt has nothing to do with training neural network. One reading the excerpt would not even know that a neural network could be trained.

Also in response to the previous Office Action, Applicants argued that Gevins does not relate to pulsing. The Examiner cites column 13, lines 44-47 of Gevins. See page 15 of the Office Action. It is difficult to understand how the pulse widths described in Gevins could have any correlation with the claimed invention. The Gevins pulse widths do not relate to pulsed neurons. The pulse widths described in Gevins do not even relate to the neural network mentioned in Gevins. It appears that the Examiner has simply performed computer searching for "neural" and "pulse" in the reference.

Applicants are unsure why the Examiner continues to rely on Gevins when it is plainly irrelevant. It is respectfully requested that the prior art rejections be withdrawn.

### **Withdrawal of Finality**

As discussed above, the Gevins reference does not relate to the subject matter of the claimed invention. The Gevins reference was not relevant to the original claims and is not relevant to the amended claims. Applicants' claim amendments do not change whether Gevins was/is relevant. Applicants respectfully request that the finality of the present Office Action be

withdrawn so that the claims can undergo a meaningful examination.

### Information Disclosure Statement

The Examiner has kindly acknowledged most of the references submitted. However, the Examiner indicates that the Gerstner reference is illegible. A clear copy of the reference was submitted on June 1, 2004. It appears that the Examiner finalized the June 9, 2004 Office Action before the clear copy of Gerstner reached the Examiner. For Examiner's convenience, an additional clear copy is enclosed. Also enclosed is a copy of Form PTO-1449, showing only the Gersner reference. The Examiner is requested to initial next to the citation, sign the form and return the copy of same to a undersigned to indicate that the reference has been considered.

### Specification Objections

The Examiner questions element 402 in Fig. 4. For clarification, "WHICH S?" has been changed to --WHICH INPUT SIGNAL?--. Also, the wording on page 226 of the application has been revised to clarify the translation and provide a description that more closely corresponds with the original German language application.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

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By: Mark J. Henry  
Mark J. Henry  
Registration No. 36,162

1201 New York Avenue, NW, Suite 700  
Washington, D.C. 20005  
Telephone: (202) 434-1500  
Facsimile: (202) 434-1501